

## SENIOR ELECTRICIAN

### DEFINITION

To lead and participate in the installation, modification, maintenance, repair, overhaul and adjustment of various city electrical wiring, equipment and related devices; to troubleshoot and calibrate electrical systems; to provide functional and technical lead guidance; and perform related duties as assigned.

### DISTINGUISHING CHARACTERISTICS

This is the advanced journey or lead level class in the Electrician series. Incumbents perform the full range of duties as assigned and receive only occasional instruction or assistance as new or unusual situations arise, and are fully aware of the operating procedures and policies of the work unit. Employees in this class are distinguished from the Electrician class in that the Senior level provides technical and/or functional guidance over assigned staff.

### SUPERVISION RECEIVED AND EXERCISED

Receives direction from an assigned supervisor.

Exercise technical and functional guidance over assigned staff.

ESSENTIAL FUNCTIONS – Functions may include, but are not limited to, the following:

To lead and participate in the installation, modification, maintenance, repair, overhaul and adjustment of various city electrical wiring, equipment and related devices including troubleshooting and the calibration of electrical systems; and perform the most skilled or complex duties.

Assist in the establishment of schedules and methods related to the installation, modification, maintenance, repair, overhaul and adjustment of various city electrical wiring equipment and related projects; schedule staff to make repairs and equipment replacements; notify departments when making major repairs.

Monitor work in progress at the work site; provide technical assistance to staff and direct corrections and modifications as appropriate.

Train and instruct new and less experienced employees in proper work methods, tools, equipment, and safety precautions; ensure safety of work sites by utilizing appropriate safety methods, equipment and devices, including traffic control.

Assist in the assignment and layout of work for staff including conducting pre-job inspections.

Provide functional and technical information to staff on electrical systems and their operation; hold informal training as needed.

Discuss job assignments with staff to assess status and provide guidance where needed.

Maintain and forecast supply budget for equipment replacement and upgrades, staffing requirements, vehicles and expendables; prepare cost estimates for minor and major Capital Improvement Projects.

Maintain records involving time, labor and material for electrical shop assignments; estimate materials, tools and equipment needed for work assignments; prepare reports of time material expended.

Coordinate and oversee the design and planning of wiring needs for city events; contact event coordinator; establish special voltage and outlet requirements for event area.

Establish and assure adherence to preventive maintenance practice and schedule by staff.

Design and oversee installation of electrical equipment.

Construct, install, maintain, test, and repair electrical mechanisms, panels, switches, motors, controls, power output frequency regulators, solenoids, voltage controls, high and low cutout alarms, relays, electrical apparatus, lighting systems, distribution panels, field wiring, lighting fixtures and dimmer controls, all types of inside wiring conduits, HVAC line voltages, motor and motor controls, parks and marina electrical systems, photovoltaic, lift stations line voltages; test electrical equipment related to emergency generators, irrigation controls, and other related equipment.

Lays out and install new wiring; run conduit; pull, splice and terminate wiring; bend and shape conduit to specifications.

Read and interpret electrical plans, specification, blueprints and sketches.

Estimate materials, tools and equipment needed for work assignments; prepare reports of time material expended.

Order and picks up materials and supplies from outside vendors as appropriate.

Assist in developing specifications for contract work; inspect contract work for conformity to specifications; prepare reports as needed.

Operate and maintains a wide variety of hand and power tools, shop tools and other equipment used in the trade.

Assist other trades on major jobs.

Respond to emergency situations in off-hours as required.

Operate trucks and auxiliary equipment; observe safe work methods and safety precautions related to the work; cone and flag work sites to secure from traffic; use appropriate safety equipment and devices; attend safety meetings; inspect and repair safety hazards encountered in the course of work.

Keep work related records using a computer.

Operate City vehicles with attachments skillfully and safely.

In the absence of the supervisor, assume responsibilities as needed.

Build and maintain positive working relationships with co-workers, other City employees and the public using principles of good customer services.

Perform other related duties as assigned.

### MINIMUM QUALIFICATIONS

#### Knowledge of:

Principles of electrical theory.

Electronic lighting control systems.

National Electrical Code and the Electrical Safety Orders of the Industrial Accident Commission.

Principles, techniques, tools and materials used in the electrical trade.

Practices of assigning and reviewing the work of others.

Pertinent rules, laws, codes and policies related to area of assignment.

Practices and procedures of traffic control and flagging.

Safe work methods and safety regulations pertaining to the work, including the use of personal protective equipment.

Principles and practices of conflict resolution.

Computer equipment and software applications related to assignment.

English usage, spelling, grammar, and punctuation.

Ability to:

Perform skilled work in the installation, repair and maintenance of electrical systems, circuits and equipment.

Diagnose and determine effective course of action for correcting electrical malfunctions.

Read and interpret wiring diagrams, schematics, drawings, manual, blueprints and plans.

Inspect, troubleshoot, diagnose, and repair electrical malfunctions.

Operating and maintaining specialized tools used in electrical and related building trades.

Design, lay-out and prepare sketches and plans for electrical jobs.

Estimate necessary materials and equipment to complete assignments.

Basic mathematical computations.

Train and instruct others in proper work methods and techniques.

Use and operate tools and equipment related to assignment, including personal protective equipment.

Keep work related records and prepare reports using a computer.

Work effectively at remote locations without direct supervision.

Operate City vehicles observing legal and defensive driving practices.

Follow oral instruction; read, interpret, follow and explain written instructions, construction sketches and equipment manuals.

Use initiative and sound independent judgment within established guidelines.

Communicate clearly and concisely, both orally and in writing.

Work overtime and off-hours shifts when necessary because of an emergency or in the interest of the efficiency of the department.

In the absence of a supervisor, assume responsibilities as needed.

Establish and maintain effective working relationships with those contacted in the course of work.

### Experience and Training

Any combination of experience and training that would likely provide the required knowledge and abilities is qualifying. A typical way to obtain the knowledge and abilities would be:

#### Experience:

Four years of responsible journey level experience in maintenance, installation and repair of electrical systems.

#### Training:

Equivalent to the completion of the twelfth grade supplemented by specialized training in electrical system installation, repair and maintenance.

### License or Certificate

Possession of a valid California driver's license.

### PHYSICAL DEMANDS

On a continuous basis, sit, stand, bend, climb ladders (up to 40 feet), stoop, kneel, crouch, crawl and twist for varying periods in the course of work; use hands and fingers to grasp tools; make repetitive hand and body motions; twist and reach below and above shoulder; lift or carry objects weighing up to 100 pounds; work in a bucket up to 52 feet in the air; communicate with co-workers using a two-way radio; use telephone, and write or use a keyboard to communicate through written means; see in the normal vision range with or without correction to read computer screen, blueprints, and drafting plans; hear in the normal range with or without correction.

WORK ENVIRONMENT

Work is performed both indoors and outdoors environments. Some work is performed with exposure to low to loud noise level; frequent fieldwork is required with exposure to a variety of weather conditions and the external environment; tasks may require working in tightly enclosed spaces and the use of ladders or other safety equipment to gain access to hard to reach locations; some work is performed in crawl spaces, attics or on rooftops. Some work may require exposure to unpleasant and potentially hazardous substances and high voltage.

4/03